

Histopathology: Overview

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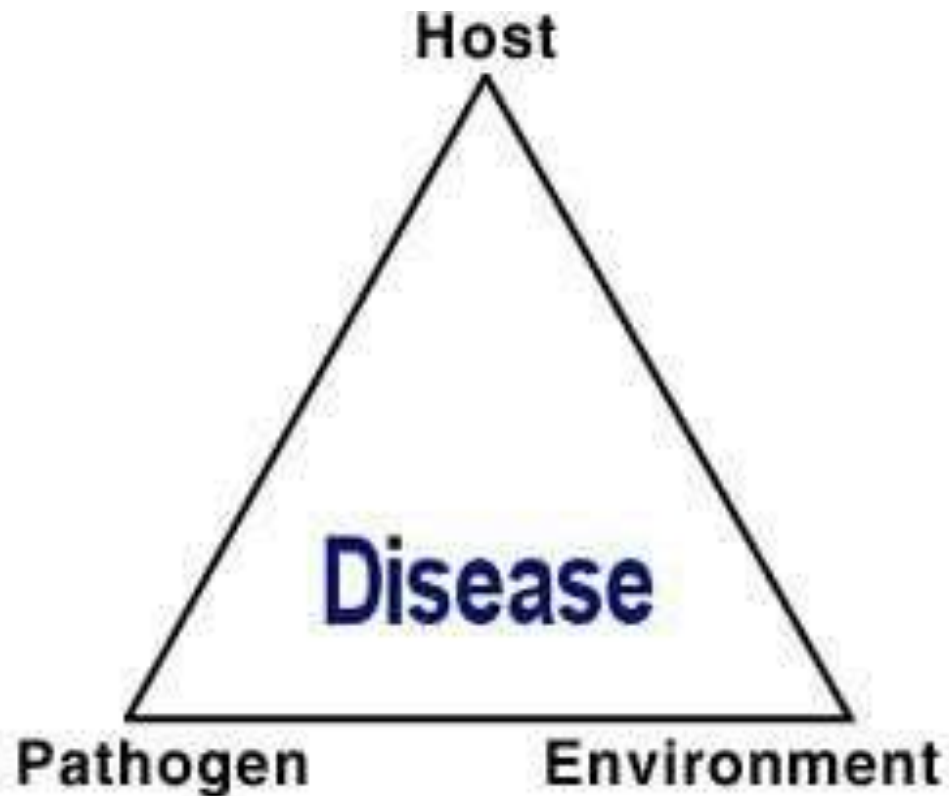
Pathology

- Pathology is the study (*logos*) of suffering/diseases (*pathos*)
- Clinical practice to investigate the causes (etiology) of the diseases and the mechanism (pathogenesis)

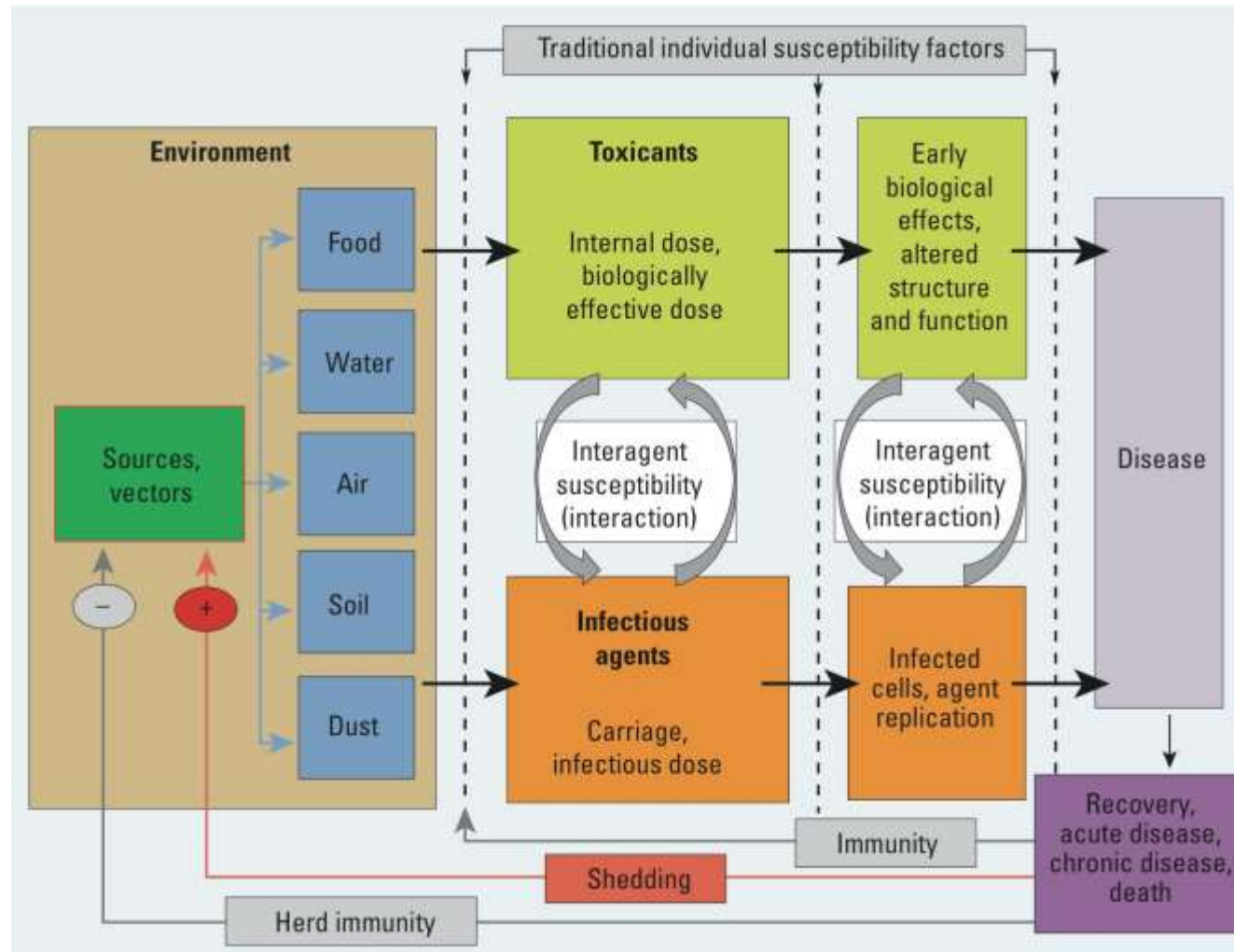
Etiology study of the cause of the disease

- Idiopathic – no identifiable causes
- Iatrogenic – occur as a result from medical treatment
- Congenital – disease existing at birth or before birth, involves in the development of fetus
- Acquired - develops post –fetally
- Nosocomial – due to being in a hospital
- Environments

The Disease Paradigm (simplified)



The Disease Paradigm (Complex)



Diagnosis

➤ Refers to the process of attempting to determine or identify a possible disease or disorder.

Prognosis

➤ Refers to the expected outcome of a disease

➤ **Signs** – objective alteration that can be observe or measured by another person; pulse rate, blood pressure, Temperature etc

➤ **Symptoms** – subjective experiences reported by the person, complains such as pain, nausea, vomiting etc

Epidemiology

- Is the study of tracking patterns of disease occurrence and transmission among populations and by geographic areas.
- Incidence of a disease— is the number of new cases occurring in specific time of period
- Prevalence of a disease — is the number of existing cases within a populations during the specific time of period.

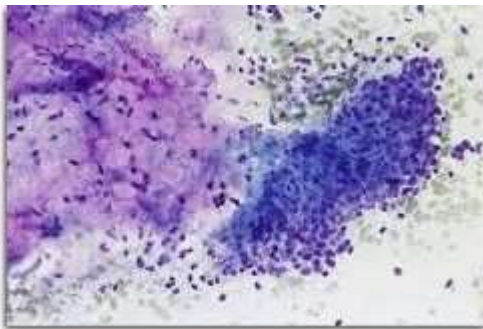
Subdivision of Pathologists

- Experimental pathologists – scientists spending most of their time in research
 - Investigate cause and mechanisms of disease
 - Jobs include – research and teaching



Anatomic Pathologists

- Perform autopsies, examine all tissues removed from live patients, and examine cell preparations to look for cancer cells
 - Includes:
 - Autopsy pathology
 - Surgical pathology
 - Cytopathology
 - Molecular (DNA, RNA) diagnosis



Clinical Pathologists

- Analyze various specimens removed from patients, such as blood, urine, feces, spinal fluid, or sputum for chemical substances, microorganism, antigens and antibodies, nucleic acids, atypical blood cells, and coagulation factors
 - Includes:
 - Chemistry
 - Microbiology
 - Hematology
 - Blood Banking
 - Immunopathy
 - Molecular Diagnosis

